CLAIMS

1. A contact for a connector comprising:

a terminal portion provided in the vicinity of an end and a contacting portion provided in the vicinity if the other end of the contact, which are formed by processing a metal material into a predetermined shape;

a foundation plating layer and a gold plating layer or a metal alloy plating layer including gold, which are formed on substantially entire surface of the contact including the terminal portion and the contacting portion; and

a diffusion preventing area formed between the terminal portion and the contacting portion owing to be processed on the gold plating layer or the metal alloy plating layer including gold, which has low wetting property with respect to solder so that melted solder rarely diffuses thereon.

2. The contact for the connector in accordance with claim 1, wherein the diffusion preventing area is formed in a manner so that the foundation plating layer is unsheathed owing to evaporation and removing of at least a part of gold or metal alloy including gold at a portion irradiated by laser beams when the laser beams are irradiated on the gold plating layer or the metal alloy plating layer including gold.

3. The contact for the connector in accordance with claim 1, wherein at least a part of the diffusion preventing area is a metal alloy

layer formed of alloying gold and a material of the foundation plating layer at a portion irradiated by laser beams when the laser beams are irradiated on the gold plating layer.

4. The contact for the connector in accordance with claim 1, wherein at least a part of the diffusion preventing area is a diffusion layer formed of diffusing a material except gold of the metal alloy including gold on a surface at a portion irradiated by laser beams when the laser beams are irradiated on the gold plating layer.

5. The contact for the connector in accordance with claim 1, wherein the diffusion preventing area is a metal alloy layer which is formed of evaporation and removing at least a part of gold and alloying remained gold and nickel.

6. A manufacturing method of an element to be soldered comprising:

a step for processing a metal material into a predetermined shape in a manner so that a terminal portion is formed in the vicinity of an end of the element;

steps for forming a foundation plating layer and a gold plating layer or a metal alloy plating layer including gold on substantially entire surface of the element including the terminal portion; and

a step for forming a diffusion preventing area, which has low wetting property with respect to solder so that the melted solder rarely diffuses thereon, owing to irradiating laser beams on the gold plating layer or the metal alloy plating layer including gold at a portion between the terminal portion and a portion not to be soldered.

7. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the diffusion preventing area is formed in a manner so that the foundation plating layer is unsheathed owing to evaporation and removing of at least a part of gold or metal alloy including gold at a portion irradiated by laser beams when the laser beams are irradiated on the gold plating layer or the metal alloy plating layer including gold.

8. The manufacturing method of the element to be soldered in accordance with claim 6, wherein at least a part of the diffusion preventing area is a metal alloy layer formed of alloying gold and a material of the foundation plating layer at a portion irradiated by laser beams when the laser beams are irradiated on the gold plating layer.

9. The manufacturing method of the element to be soldered in accordance with claim 6, wherein at least a part of the diffusion preventing area is a diffusion layer formed of diffusing a material except gold of the metal alloy including gold on a surface at a portion irradiated by laser beams when the laser beams are irradiated on the gold plating layer.

10. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the diffusion preventing area is a metal alloy layer which is formed of evaporation and removing at least a part of gold and alloying remained gold and nickel.

11. The manufacturing method of the element to be soldered in accordance with claim 6, wherein a removing solution of gold is acted to the gold plating layer or the metal alloy plating layer

including gold at a portion including at least an area where the laser beams will be irradiated, before irradiating the laser beams.

12. The manufacturing method of the element to be soldered in accordance with claim 6, wherein a removing solution of gold is acted to the gold plating layer or the metal alloy plating layer including gold at a portion including at least an area where the laser beams were irradiated, after irradiating the laser beams.

13. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the foundation plating layer is a nickel plating layer.

14. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the foundation plating layer is a nickel plating layer and a palladium-nickel alloy plating layer formed thereon.

15. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the metal alloy including gold is a gold-nickel alloy.

16. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the laser beams are irradiated at a portion in the vicinity of the terminal portion.

17. The manufacturing method of the element to be soldered in accordance with claim 6, wherein laser beams in a range from 0.5 to 5 mJ/pulse of the energy per one pulse and in a range from 100 to 2000 mJ/mm^2 of the energy per a unit area are used.

18. The manufacturing method of the element to be soldered

in accordance with claim 6, wherein laser beams in a range equal to or smaller than 3 mJ/pulse of the energy per one pulse and in a range equal to or smaller than 1200 mJ/mm^2 of the energy per a unit area are used.

19. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the laser beams have a wavelength equal to or shorter than 1100 nm.

20. The manufacturing method of the element to be soldered in accordance with claim 6, wherein

the laser beams have a beam spot diameter larger than a predetermined width of the diffusion preventing area necessary for preventing diffusion of melted solder, and

the laser beams are irradiated with sifting a predetermined pitch in a predetermined direction so as to form overlapping portion of adjoining nuggets, and the width of the overlapping portion is wider than a predetermined width necessary for preventing the diffusion of melted solder.

21. The manufacturing method of the element to be soldered in accordance with claim 20, wherein

the element to be soldered is conveyed as a state of semi-finished blank in which a plurality of the elements is arranges at a predetermined pitch an à side of band metal plate; and

the laser beams are irradiated to two sides of the element to be soldered in a section parallel to a conveying direction of the semi-finished blank in a direction having a predetermined angle

except 90 degrees with respect to the conveying direction of the semi-finished blank.

22. The manufacturing method of the element to be soldered in accordance with claim 6, wherein the element to be soldered is a contact for a connector, and a contacting portion is formed in the vicinity of an opposite end of the terminal portion.